



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/015,008	12/11/2001	Paul T. Corcoran	00-838	2086

719 7590 08/11/2003

CATERPILLAR INC.
100 N.E. ADAMS STREET
PATENT DEPT.
PEORIA, IL 616296490

EXAMINER

BUI, BRYAN

ART UNIT PAPER NUMBER

2863

DATE MAILED: 08/11/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

A70

Office Action Summary

Application N .

10/015,008

Applicant(s)

CORCORAN ET AL.

Examiner

Bryan Bui

Art Unit

2863

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 19 June 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-26 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 17-19 and 21-26 is/are allowed.
- 6) ☒ Claim(s) 1, 2, 5, 9, 10 and 20 is/are rejected.
- 7) ☒ Claim(s) 3, 4, 6-8 and 11-16 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 4.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Notice to Applicants

1. Applicants' papers filed on 6/19/2003 have been received and entered. Claims 1-126 are pending in the application.
2. Applicants' remarks have been considered but it moot in view of the new ground rejection.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1-2, 5, 9-10 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Corcoran (U.S. Patent No. 5,736,939).

With respect to claims 1, 5, 9 and 20, Corcoran discloses the features of the invention, comprising: determining an angular slope of a mobile machine as the mobile machine traverses the pavement (e.g. column 3, lines 36-40); determining a change in elevation of the pavement as a function of the angular slope and a distance from a first ground engaging member to a second ground engaging member on the mobile machine, the change in elevation being indicative a profile (side view or shape or characteristic) of the pavement (e.g. figures 1, 6 and column 3, lines 36-57, column 5, line 16-25 and column 6, lines 17-34). It is noted that figure 6 is clearly showed a first

Art Unit: 2863

ground engaging member and a second ground engaging member (two tires), and it would have been obvious to one of the skill in the art to realize the variations in the vertical elevation of the pavement over a given horizontal is a profile which indicates as a function of the angular slope and the horizontal distance by taken sine of the angle that the slope of the road make with a horizontal reference plane as taught by Corcoran in column 5, lines 16-25.

With respect to claims 2 and 10, Corcoran further discloses a position determining system for determining a location of the change in elevation (e.g. column 3, lines 31-40).

Allowable Subject Matter

5. Claims 3, 4, 6-8 and 11-16 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

6. The following is a statement of reasons for the indication of allowable subject matter: Claims 17-19 and 21-26 are allowable over the prior art of record because the prior art does not disclose the claimed combination, particular require the step of establishing a maximum allowable change in slope of the pavement which being a function of a maximum allowable profile deviation and the maximum allowable profile deviation being indicative of the profile specification and controlling an amount of compaction by the compactor during a future pass as a function of the profile deviation as the compactor approaches the determined location.

Response to Argument

7. Applicants' argument is that Corcoran does not teach the limitation of determining a change in elevation of the pavement as a function of the angular slope and a distance from a first ground engagement member and a second ground engagement member on the mobile machine. This argument is not well taken, in order to make a clear response to the applicants, the examiner provides this limitation is taught by Corcoran through a commonly technique that one of the skill in the art to realize the variations in the vertical elevation of the pavement over a given horizontal is a profile which indicates as a function of the angular slope and the horizontal distance by taken sine of the angle that the slope of the road make with a horizontal reference plane as taught by Corcoran in column 5, lines 16-25. Further, in figure 6: a first value of **elevation** is sensed at a first position and a second value of **elevation** is sensed at a second position by the position sensor (304) on the road and the slope of the grade of the road is calculated from the first position to the second position is clearly defined the limitation as claimed. Applicants should be considered the meaning of these paragraphs again (column 6, lines 17-29). Elevation is the height to which something is elevated above a point of reference, as the ground.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Art Unit: 2863

The reference of Hill et al. (U.S. Patent No. 4,171,907) discloses an electro-optic distance measuring device.

The reference of Angove (U.S. Patent No. 4,697,352) discloses a highway profile measuring device.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Bryan Bui whose telephone number is 703-305-4490. The examiner can normally be reached on M-Th from 7am-4pm, and Alternate Fridays from 7:00am-3:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John E Barlow can be reached on 703-308-3126. The fax phone numbers for the organization where this application or proceeding is assigned are 703-308-7722 and 703-308-7724.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0956.



BRYAN BUI
PRIMARY EXAMINER

BB
August 5, 2003